

Product Rule $x^a \cdot x^b = x^{a+b}$

HW 4/19

What Did the Boy Measuring Stick Say When He Saw the Girl Measuring Stick?

Simplify the product, then cross out the letter pair next to the correct answer. For each letter pair that you DON'T cross out, write the upper case letter in the box containing the lower case letter.

1 $7(2m^2 + 5)$

2 $-3(8m^2 - 4m)$

3 $2m(m^3 + 9)$

4 $m^2(-5m - 6)$

Answers 1-4 **j • O** $-5m^4 - 6m$

b • L $2m^4 + 18m$

g • V $14m^2 + 35$

o • E $-24m^2 - 12$

m • F $-5m^3 - 6m^2$

e • A $2m^4 + 18m^2$

p • U $-24m^2 + 12m$

5 $9(4a^2 - a + 2)$

6 $3a(12 + 5a - a^2)$

7 $-4a^2(7a^2 + 15a - 1)$

8 $2a^3(6a^2 - 2a + 3)$

Answers 5-8 **g • T** $-28a^4 - 60a^3 - 4a$

i • L $36a + 15a^2 - 3a^3$

d • H $12a^5 - 4a^4 + 6a^3$

f • T $36a^2 - 9a + 18$

b • I $12a^5 - 8a^4 - 6a^3$

a • S $-28a^4 - 60a^3 + 4a^2$

m • E $36a^2 + 15a + 18$

9 $x^2y(x^2 - y^2)x^4y - x^2y^3$

10 $-5xy^2(-x^3y + 4xy^3)$

11 $9xy(2x^2y + 9xy - 4xy^2)$

12 $-x^2y^2(5x^2 - 8xy + y^2)$

Answers 9-12 **i • T** $-5x^4y^3 + 8x^3y^3 - 2x^2y^3$

n • D $x^4y - x^2y^3$

c • S $-5x^4y^2 + 8x^3y^3 - x^2y^4$

p • R $18x^3y^2 + 81xy^2 - 36x^2y^2$

l • B $18x^3y^2 + 81x^2y^2 - 36x^2y^3$

d • W $x^4y + xy^3$

k • N $5x^4y^3 - 20x^2y^5$

13 $3cd^4(2c^4 - 5c^2d^2 - 18d^4)$

14 $8c^2d^2(3c^4d^3 + 10c^3d^4 + 11)$

15 $-9c^7d^3(16c^5d^2 - 5c^2d^5)$

16 $4c^5(3c^2 - 20cd - 3d^2)$

Answers 13-16 **c • S** $24c^6d^5 + 80c^5d^6 + 88c^2d^2$

n • T $6c^5d^4 - 15c^2d^6 + 54cd^8$

h • A $-144c^{12}d^5 + 45c^9d^8$

k • R $6c^5d^4 - 15c^3d^6 - 54cd^8$

f • N $24c^6d^5 + 80c^2d^6 + 88cd^2$

q • S $12c^7 - 80c^6d - 12c^5d^2$

l • M $-144c^{12}d^6 + 45c^5d^8$

a b c d e f g h i j k l m n o p q